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Contextual Effects on Populist Radical Right Support: Consensual Neighbourhood Effects and the Dutch PVV

1. Introduction

Recent decades have seen a re-emergence of populist radical right-wing political parties across Europe, which has attracted considerable attention from the political establishment, media, and academia, as well as from the general public (Mudde, 2007; Inglehart & Norris, 2016). Social scientists in general and political scientists in particular have devoted significant amounts of time and resources in explaining why millions of voters in liberal democracies support these parties (Golder, 2016). However, what is often missing from these accounts is a geographical perspective that goes beyond the level of the nation-state, as recently emphasized by Golder (2016). This is a huge limitation, as it has been shown that voting behaviour is profoundly influenced by place-based factors: Voters make up their minds in the social settings in which they live, and these settings provide important cues for their voting behaviour (e.g. Johnston & Pattie, 2006).

Previous studies on contextual effects on populist radical right support have mainly focused on the effects of the local ethnic composition and local economic conditions. This study examines these effects, but more importantly adds a third contextual effect that has received less attention in literature on the populist radical right, which is that of the local normative context. People's political views are expected to be influenced by their neighbours'. This effect has received ample attention in the general electoral geography literature but has not often been applied to populist radical right support (see Dülmer & Klein, 2005 for an exception). This study aims to fill this gap by examining the effect of the local normative context on support for the Dutch *Partij voor de Vrijheid* (PVV), with specific attention to the mechanisms that may produce this effect.

2. The populist radical right and the PVV

A range of terms has been adopted to describe the party family under scrutiny, such as 'extreme right', 'far right', 'national populism', and 'xenophobic populism' (Mudde, 2007). We follow Mudde (2007) in his oft-cited use and definition of the term 'populist radical right'. The core ideology of populist radical right-wing parties (PRRPs) consists of a combination of nativism, authoritarianism, and populism. Nativism refers to the view that states should be inhabited exclusively by one native group, and that non-native elements constitute a fundamental threat to the homogeneous 'nation-state'. Authoritarianism is defined as the belief in a strictly ordered society, in which violations of authority are to be severely punished. Finally, populism considers society to be divided into two homogeneous groups, 'the pure people' and 'the corrupt elite', and argues that politics should reflect the will of the morally superior former group (Mudde, 2007; Golder, 2016).

The focus of this research is on the *Partij voor de Vrijheid* (Party for Freedom; PVV hereafter), a political party in the Netherlands established by its leader and only member Geert Wilders in 2006 that has won a considerable share of the vote in national elections (5.9% in 2006, 15.4% in 2010, 10.1% in 2012, and 13.1% in 2017). Despite some important differences between the party's ideology and the PRRP ideal type, the PVV is generally classified as part of the party family of the populist radical right (e.g. Vossen, 2011; Inglehart & Norris, 2016). First, the PVV has adopted a nationalist ideology (the party itself designates it as 'patriotic' (PVV, 2012)) that prioritizes the interests of the 'ordinary Dutchman' above those of other groups. This is illustrated by the PVV's perceived need for the Netherlands to 'de-Islamize' by, among others, closing its borders to refugees and migrants from Islamic countries, closing all mosques and Islamic schools, and banning the Koran (PVV, 2017; see also Vossen, 2011). Second, the PVV has adopted a 'tough on crime' stance characterized by, for example, proposed increased investments in police, longer prison sentences, and austere prison conditions. This has been linked to the issues of 'de-Islamization' and anti-immigration, as exemplified by proposals to register the nationality of criminals and to evict non-Dutch criminals (PVV, 2012). Third, the PVV has increasingly adopted a populist style and program, contrasting the 'common people' with the 'corrupt elite' (Vossen, 2011).

There are, however, some important differences between the PVV and other PRRPs. Firstly, Wilders himself does not recognize relations with other European PRRPs, with the exception of 'borderline cases' such as the Danish People's Party and the United Kingdom Independence Party (Vossen, 2011). Secondly, the PVV has often advocated progressive viewpoints on ethical issues, supporting, for example, the right to abortion and euthanasia as well as women and gay emancipation (Vossen, 2011).

3. Contextual effects on support for PRRPs: theories and evidence

Spatial patterns in voting behaviour can be explained by the combination of compositional and contextual effects. Compositional effects arise because the spatial distribution of voters is not random but structured by individual-level factors (e.g. age, education), which are in turn related to voting behaviour. The individual-level predictors of PRRP support have been well-documented and – for most characteristics – findings have been relatively consistent, with higher PRRP support among natives, the educationally less qualified, and males (e.g. Golder, 2016; Inglehart & Norris, 2016). On top of these compositional effects exists a contextual effect (often termed a 'neighbourhood effect'), which is the main focus of this study: daily living environments have an influence on people's voting decisions over and above their individual characteristics, and as a result similar individuals living in different places may vote for different parties (e.g. Johnston & Pattie, 2006).

The rest of this section will review the literature on PRRP support involving three types of contextual effects – the effects of: (1) the ethnic composition of the local environment; (2) local economic conditions; and (3) the local normative context. Whereas the first two effects have received ample attention in the literature on PRRP support, the contextual effect of the local normative context has been examined less frequently, which is surprising as it is central to much of the general electoral geography literature (e.g. MacAllister et al., 2001; Johnston & Pattie, 2006). This effect will therefore be examined more closely here, with specific attention paid to the mechanisms that might cause the effect.

3.1. Local ethnic composition

The contextual effect that has attracted most attention in the literature on PRRPs is that of the ethnic composition of the local environment, which is perhaps unsurprising as it is directly related to the core of PRRP ideology: nativism and anti-immigration. Two (seemingly) opposing hypotheses have been suggested here, that of ethnic contact and ethnic threat. The ethnic contact hypothesis is based on contact theory (Allport, 1954) and argues that a higher percentage of ethnic minorities in the residential environment will increase positive interethnic contact, which in turn decreases negative attitudes towards minorities as well as the chance to vote for a PRRP (Biggs & Knauss, 2012; Savelkoul et al., 2017). This effect is expected to be greater under certain conditions, such as equal group status, common objectives, intergroup cooperation, and the support of authorities, law, and custom (Savelkoul et al., 2017). In the context of this research, based on contact theory, it is hypothesized that *(H1A) individuals living in residential environments with higher shares of ethnic minorities are less likely to support the PVV*.

In contrast, the presence of ethnic minorities may also lead to feelings of ethnic threat. This hypothesis is based on Blumer's (1958) group threat theory, which argues that majority groups develop prejudice against other groups as a defensive reaction to real or perceived threats. These threats could be economic, political, or cultural (Biggs & Knauss, 2012). As feelings of threat are expected to grow with increasing minority group size and visibility, the presence of large ethnic minority groups in the local environment is often presumed to instigate feelings of ethnic threat and, as a result, increase PRRP support (e.g. Rink et al., 2009; Enos, 2017; Savelkoul et al., 2017). Therefore, group threat theory would predict that *(H1B) individuals living in residential environments with higher shares of ethnic minorities are more likely to support the PVV*.

The evidence on the effect of the local ethnic composition on PRRP support is rather mixed, with some studies finding negative effects – in line with contact theory (e.g. Bowyer, 2008; Rydgren & Ruth, 2013), others finding positive effects in line with group threat theory (e.g. Coffé et al., 2007; Bowyer, 2008; Savelkoul et al., 2017; see also Enos, 2017, for evidence of ethnic threat in the US), and yet others

finding no effect at all (e.g. Lubbers & Scheepers, 2000; De Blok & Van der Meer, 2018). These contradictory results are perhaps unsurprising, as studies vary widely in terms of the party that is examined (although all are Western European), the study design (e.g. multilevel analyses using individual-level data versus ecological analyses using election outcomes), the level of the geographical units that are examined, and the minority groups that are considered (e.g. blacks, Muslims, immigrants). An explanation of differences in findings that has recently been adopted is that it is *changes* in the share of ethnic minorities in the residential environment rather than minority shares in itself that instigate feelings of threat and as a result increase PRRP support (Kaufmann, 2017). This is related to earlier work on the so-called defended neighbourhood hypothesis (Green et al., 1998), which argues that racially motivated crime (an outcome different from yet related to PRRP support) should be seen as a defensive reaction toward inflows of minority groups into traditionally homogeneous neighbourhoods. In line with these arguments, we expect that *(H1C) individuals living in residential environments which have seen recent increases in ethnic minority shares are more likely to support the PVV.*

3.2. Local economic conditions

Local economic conditions have frequently been linked to voting patterns, both in the general electoral geography literature (e.g. Johnston et al., 2000) and for PRRPs (e.g. Lubbers & Scheepers, 2000; Coffé et al., 2007). In Great Britain, for example, Johnston et al. (2000) found that whereas some voted sociotropically - according to their evaluations of the performance of either the national or regional economy – and some voted egocentrically – according to their own situations irrespective of the national/local – others voted altruistically – according to their neighbours' situations, irrespective of their own. For PRRPs, the expected effect of local economic conditions has generally been negative, with areas (mainly municipalities or regions) that are doing better economically expected to show lower PRRP support (e.g. Lubbers & Scheepers, 2000; Rink et al., 2009). At least two theories have been argued to support this relationship. The first is derived from conflict theory and argues that

competition between natives and immigrants is more severe in areas that are doing worse economically, which it is argued translates into exclusionist reactions towards minority groups (Lubbers & Scheepers, 2000; Coffé et al., 2007; Rink et al., 2009). The second theory posits that voters hold the government responsible for the bad state of the local economy, which is thought to augment political discontent (Coffé et al., 2007; Rydgren & Ruth, 2013). This is related to the 'protest vote' mechanism, in which supporters of PRRPs use their support as a way of punishing other ('mainstream', established) political parties rather than actually supporting the PRRP's policy agenda and wanting it to govern (Mudde, 2007). Based on these two theories, it could be hypothesised that *(H2A) individuals living in residential environments with better economic conditions are less likely to support the PVV*.

Tests of these theories have mainly focused on unemployment levels, which have served as an indicator of labour market conditions (Bowyer, 2008). This has produced rather mixed findings, however, with only a few studies finding the expected positive effect of unemployment rates (e.g. Rydgren & Ruth, 2013, De Blok & Van der Meer, 2018) or *increases* in unemployment rates (e.g. Lubbers & Scheepers) on PRRP support. In contrast, most studies have found no effect of unemployment rates (e.g. Dülmer & Klein, 2005; Coffé et al., 2007; Bowyer, 2008; Rink et al., 2009; Biggs & Knauss, 2012; Van Gent et al., 2014), and others have found a negative effect (e.g. Lubbers & Scheepers, 2000) or a positive effect of the percentage of the population that is in full-time employment (Ford & Goodwin, 2010). To explain these mixed findings, scholars have proposed theories that predict a positive relationship between local economic conditions and PRRP support. First, negative effects of unemployment on PRRP support are in accordance with theories of 'issue ownership': as other, mainly left-wing, parties might be perceived as better fit to tackle economic problems such as unemployment, PRRPs might lose voters to these parties when local economic conditions are poor. In contrast, in areas experiencing economic prosperity, issues such as immigration and crime might become more important, increasing PRRP support (Coffé et al., 2007; Rink et al., 2009). Second, higher PRRP support in areas that are doing better economically could be explained by the concept of welfare chauvinism, which refers to the idea that people in wealthy areas vote for PRRPs

to safeguard the wealth they have (Coffé et al., 2007; Rink et al., 2009). Based on these two theories, a conflicting hypothesis can again be formulated, which presupposes that *(H2B) individuals living in residential environments with better economic conditions are more likely to support the PVV*.

3.3. The local normative context

This contextual effect posits that people's political attitudes are influenced by those of their neighbours, which can be seen as the 'classic neighbourhood effect' (Johnston et al., 2005). It has received ample attention in the general electoral geography literature (e.g. MacAllister et al., 2001; Johnston & Pattie, 2006; Gallego et al., 2016), but has been almost completely neglected in the literature on PRRPs (see Dülmer & Klein, 2005, for an exception). Therefore, this section will provide a short discussion of the effect of the local normative context as theorised in the general electoral geography literature before turning to the evidence on PRRPs.

Forty years ago, Miller (1978) identified four possibilities through which the local normative context might affect voting behaviour (he termed it 'environmental effects'), depending on how people respond to contact with dissimilar others (see also Jones & Duncan, 1995). Firstly, they may not respond at all, and the local normative context has no influence on voting behaviour. Secondly, a reactive effect could be apparent, where people will be irritated, alarmed, and antagonized by living among those unlike themselves. Thirdly, a consensual effect could be present, in which people may be influenced towards agreement with their neighbours. Fourthly, classes may operate in different ways, with the middle class operating according to the reactive model and the working class operating according to the consensual model (this fourth possibility was originally proposed in Przeworski & Soares, 1971). Miller found that the consensual model best explained voting behaviour in England between 1964 and 1974. More specifically, he found contextual effects to be more important than individual effects, with an especially large 'conversion effect' operating through the percentage of employers and managers (i.e. the higher the percentage of employers and managers in a constituency, the greater the Conservative party's support among all social classes).

Miller's findings are part of a large body of evidence showing that residents are more likely to support the political majority of their residential area than would be expected based on their individual characteristics alone, which is in line with the existence of a consensual neighbourhood effect found in a long line of research (e.g. Butler & Stokes, 1974; MacAllister et al., 2001; Andersen & Heath, 2002; Johnston & Pattie, 2006; Gallego et al., 2016). For example, where Miller's analyses were conducted at the constituency level, which it has been argued is too large to effectively capture the effect of the local normative context (the average UK constituency contains some 70,000 registered voters), more recent studies of UK elections have confirmed Miller's findings of a consensual neighbourhood effect at lower scales using 'bespoke neighbourhoods' (e.g. MacAllister et al., 2001).

This effect of the local normative context has, however, only rarely been examined for PRRP support, where studies have mainly focused on the effects of the local ethnic composition and local economic conditions. The local normative context might be particularly relevant in explaining PRRP voting, however. Because social norms that disapprove of anti-immigrant attitudes and PRRP support are widespread among the population, the local normative context might be crucial in determining whether PRRP support is seen as socially undesirable (Golder, 2016). Only one study was found, however, that explicitly addressed the effects of the local normative context on PRRP support. Dülmer & Klein (2005) expected the proportion of the educationally less qualified and manual workers in a region to influence the likelihood of voting for a PRRP. This hypothesis was confirmed for the proportion of educationally less qualified people at the district level, which was positive and significant after taking into account a range of individual-, district-, and Bundesländer-level variables (Dülmer & Klein, 2005). Dülmer & Klein (2005) did not, however, expand on this finding, nor did they connect it to the wider literature on neighbourhood effects (their main focus was on the effects of unemployment).

Although other studies on PRRP support have not explicitly examined the effects of the local normative context, some studies included control variables at higher levels, which allows for some inferences

about the effects of these variables. For example, some ecological analyses have found negative effects of higher education levels at the neighbourhood scale (e.g. Bowyer, 2008; Biggs & Knauss, 2012). A problem is that these studies did not include individual-level variables, which makes it impossible to tell whether these effects were individual effects, contextual effects, or a combination. An exception to this is a study by Ford & Goodwin (2010), which found higher BNP support among voters living in constituencies with lower education levels, after controlling for individual education. Moreover, the impact of constituency-level education levels was stronger than the other constituency-level variables included in the analysis, with BNP support four times as large in constituencies with very high numbers of unqualified voters compared to constituencies with very low levels (Ford & Goodwin, 2010). Even though this result was not intended as a test for effects of the local normative context and concerns the (too?) large scale of the constituency, it provides strong indications of a consensual neighbourhood effect on PRRP voting not often considered in the literature.

Based on the findings of consensual neighbourhood effects in the general electoral geography literature and of the few studies that have tested this effect on PRRP support, we hypothesise that *(H3A) individuals living in residential environments with a higher proportion of highly educated residents are less likely to support the PVV*.

Thus, the concentration of more qualified residents in particular areas is expected to result in the establishment of a local normative context, in which PRRP support is frowned upon and progressive values (e.g. favouring globalisation and international migration) are widely held. It is likely, however, that residents only start adapting to such concentrations of progressive values once they reach a certain size. At smaller shares of highly educated residents – and the associated progressive values – their presence is less visible and no pressure is felt by neighbours to adapt their political views. Only when the concentration of more qualified residents reaches a 'critical mass' will it start to exert pressure to adapt to the local normative context. To test for the existence of such threshold effects

(Galster, 2012; see also Jones & Duncan, 1995), *(H3B)* examines whether *the contextual effect of the proportion of highly educated residents in the residential environment is nonlinear*.

Such relationships between the aggregate social context and individual voting behaviour can, however, be explained by multiple underlying mechanisms (MacAllister et al., 2001), and few studies have explicitly examined the mechanisms that cause this aggregate pattern (Johnston et al., 2005; see Galster, 2012, for a more general discussion). It is often assumed that consensual neighbourhood effects are the result of local social interactions between neighbours (e.g. MacAllister et al., 2001; Dülmer & Klein, 2005). This is based on the assumptions that social contact influences voting decisions (illustrated by the now famous quote by Miller (1977: 65) that ''people who talk together vote together''), and that social networks have a local bias (Huckfeldt & Sprague, 1995; Johnston & Pattie, 2006). For example, Dülmer & Klein (2005: 244) expected PRRP support to be higher in districts with more manual workers and more residents with no or few educational qualifications, since these characteristics ''describe the structure of opportunity for contact with a potential voter for an extreme right-wing party''. Contact with potential PRRP voters was, in turn, expected to lead to a higher likelihood of PRRP voting. This is consistent with studies that have shown that individuals who talked to a person who supports a particular party are more likely to support that party themselves (e.g. Huckfeldt & Sprague, 1995; Pattie & Johnston, 1999; Beck, 2002). Based on this mechanism, consensual neighbourhood effects should be stronger for those who have frequent contact with their neighbours, whereas the political views of those who have (almost) no contact with their neighbours should not be affected (Johnston et al., 2005). Hence, it is hypothesised that *(H3C) the consensual effect of the proportion of highly educated residents in the residential environment on PVV support is stronger among individuals that have more frequent contact with their neighbours*.

4. Data and methods

4.1. Data

To evaluate these hypotheses, this study used data from Wave 1 of the Netherlands Longitudinal Lifecourse Study (NELLS; Tolsma et al., 2014), collected between December 2008 and May 2010. The data collection for this survey was executed using a two-stage stratified sampling procedure, with a quasi-random[1] selection of 35 municipalities by region and level of urbanization in the first stage and a random selection from the population registry based on age and ethnicity in the second stage. The sample is limited to people aged 15-45 and contains an oversample of Moroccan and Turkish minorities. For this study, however, non-western[2] respondents were excluded from the analyses because almost none of them supported the PVV[3]. The resulting dataset contains Dutch and western respondents (N=2785), who are nested in districts (N=245), which are nested in municipalities (N=40[4]). Municipalities are relatively large and vary widely in size and are thus inappropriate for testing social interaction effects. The district or *wijk*, on the other hand, is a large neighbourhood in the Netherlands with on average about 15000 inhabitants, which seems better fit to examine the hypothesised contextual effects.

4.2. Outcome

A dichotomous dependent variable was used that indicated respondents' support or lack of support for the PVV. Respondents were asked which political party they preferred. This question was recoded into a preference for the PVV (1) or a preference for another party (0), with the latter category also containing respondents that answered 'other, namely…'.

4.3. Individual-level controls

[1] At the first stage, sampling was not completely random because the four biggest cities in the Netherlands (Amsterdam, Rotterdam, Den Haag, and Utrecht) had to be included in order to obtain a representative sample of Moroccans and Turks.
[2] This is based on the definition of ethnicity used by Statistics Netherlands which classifies people into Dutch, western, and non-western. It categorizes individuals based on the country of birth of their parents. Western origin refers to all European countries (excluding Turkey), US, Canada, Pacific, Japan, and Indonesia. All other countries are considered non-western.
[3] Out of a total of 2415 non-western respondents in the NELLS data, only 15 (0.6%) supported the PVV.
[4] The number of municipalities in the analyses (N=40) was a bit higher than the number of sampled municipalities (N=35) because a few respondents that were living near the border of a municipality were assigned to a different municipality in the geocoding process (Tolsma et al., 2014).

The month of the interview, sex, age, ethnicity, education level, religion, and income were included in the model as individual-level variables. These variables were chosen to represent differences between individuals in the survey in their attitudes towards PRRPs, and were introduced to enable testing the effects of contextual characteristics given these differences (i.e. to 'control' for compositional effects). The month of the interview was included to control for the overall rise in popularity of the PVV over time, and was operationalised as the number of months since the start of the data collection (December 2008). A quadratic term was also included to allow for non-linear time effects.[5] Sex was coded into female (reference category) and male. Age was included as a continuous variable. Ethnicity was coded into Dutch (reference category) and western. Education level comprised the highest education attended by the respondent, coded into low (no, primary, and lower secondary education (ISCED 0-2; reference category)), middle (middle level applied and lower secondary education (ISCED 3-4)), and high (higher vocational and university education (ISCED 5-7)). Religion was coded into no religion (reference category), Catholic, Protestant, and other (the 'other' category comprised respondents that were Muslim, Jewish, Hindu, Buddhist, and those who mentioned another religion, as these classes were too small to include in the model on their own). Income was measured as the net income per month of respondents and (if applicable) their partners, coded into 0-999 euros (reference category), 1000-1999 euros, 2000-2999 euros, 3000-3999 euros, more than 4000 euros, and a category comprising respondents that did not know or did not want to state their income, which was included to prevent having to exclude these respondents from the analysis due to missing values. The distribution of these variables is shown in Table 1.

4.4. Contextual characteristics

The percentage of non-western residents in a district in 2009 was used as a proxy for the local ethnic composition, and the percentage of non-western residents in 2005 was subtracted from this percentage to measure changes in ethnic composition during this 4-year period. The average house

[5] Although support for the PVV increased during the study period, there is no evidence that it did so by attracting different types of voters in different places.

value (*WOZ waarde*) in a district in 2009 (in 1000 euros) and the proportion of residents in a district that received unemployment benefits (per 1000 15-64 year old residents) in 2009 were used as proxies for local economic conditions. All these variables were derived from Statistics Netherlands' District and Neighbourhood Map (2007; 2012).

The share of highly educated respondents in a district was used as a proxy for the local normative context. The potential relevance of this contextual variable is supported by the finding that high education was an important predictor of PVV support at the individual level (see Results section). In addition, the use of the proportion of highly educated residents instead of, for example, the mean education level, relates well to Miller's (1978) finding that in the UK in the 1960s-1970s the presence of employers and managers (the occupational groups most likely to have high educational qualifications) had a particularly large contextual effect on voting behaviour.

Because administrative data on district-level education levels were not available, precision-weighted estimates of the proportion of highly educated residents were calculated from the NELLS data. Following Jones et al. (2013), this was done by estimating a multilevel logistic regression model with high education (1=high education, 0=middle or low education) as the outcome variable, no predictors, and random intercepts at the district level. The level-2 residuals from this model were then converted to probabilities and multiplied by 100 to yield the precision-weighted percentage of highly educated residents in a district.[6] The main advantage of these precision-weighted estimates over a simple calculation of the proportion of highly educated respondents in a district is that unreliable estimates for districts with low numbers of respondents are 'shrunk' to the overall mean (Jones et al., 2013). To avoid confounding of effects of the local normative context with ethnic contact and ethnic threat

[6] To test the validity of this estimation procedure, the same process was followed for a variable that recorded whether respondents rented or owned their home, which was then correlated with the district-level percentage of homeowners. Based on the complete NELLS sample (i.e. including non-western respondents), a precision-weighted estimate of the proportion of homeowners was derived, which yielded a correlation of r=0.82 with the actual figure. Given that this estimation procedure was based on a sample with an overrepresentation of ethnic minorities, and was confined to respondents aged 15-45, this high correlation gives us confidence in the validity of our district-level education variable.

effects (e.g. Savelkoul et al., 2017), and to deal with the overrepresentation of non-western ethnic minorities in the NELLS data, non-western respondents were excluded from the calculation of the precision-weighted estimates, effectively yielding a measure of the percentage of Dutch and western residents in a district that is highly educated.[7]

4.5. Contact with neighbours

A variable capturing the frequency of contact with neighbours was used to further investigate the mechanisms behind the effect of the district-level proportion of highly educated residents. Because our district-level education variable was based on Dutch and western residents, a variable was used that captured the frequency of contact with Dutch neighbours (unfortunately, no data were available on contact with western neighbours). This was measured as the frequency of personal contact with Dutch neighbours reported by respondents, where it was stated that 'neighbours' were not just direct neighbours but anyone in the neighbourhood. This variable was coded into never (reference category; respondents that reported no opportunity for contact were also included here), yearly/monthly (combined in one category because of few respondents in the 'yearly contact' category), weekly (i.e. once or twice a week), and daily (i.e. (almost) daily).

4.6. Modelling approach

Multilevel logistic regression was used, with respondents (level 1) nested in districts (level 2) nested in municipalities (level 3). Random intercepts were included at the municipality level to account for the clustering of respondents resulting from the sampling strategy. At the district level, random intercepts were included to allow the examination of contextual effects.

Models of increasing complexity were estimated to allow the evaluation of changes in variance at the different levels and to compare measures of model fit (Hox et al., 2010). Model 1 was a null model containing only the random intercepts. Model 2 added the individual controls. Model 3 added the

[7] Additional analyses were conducted that excluded districts with fewer than 5 respondents. Those analyses showed very similar findings to those reported here.

contextual variables. Model 4 tested for nonlinear effects by including the quadratic term of the district-level proportion of highly educated residents. Finally, Model 5 added the frequency of contact with Dutch neighbours and an interaction effect between this variable and the district-level percentage of highly educated residents. The DIC statistic was used to compare models with each other. The model with the lowest DIC value is the model that provides the best fit for the data.

Respondents with missing data for the outcome variable (N=1), district variables (N=40) and contact variable (N=99) were excluded from all analyses, which resulted in a total sample of 2645 respondents nested in 236 districts nested in 40 municipalities. All continuous variables were centred around their mean to retain meaningful intercepts.[8]

All models were estimated in MLwiN 3.01 using MCMC estimation (Browne, 2009). The starting (prior) values of the MCMC estimation were estimated using IGLS. For each model, 500,000 simulations with a burn-in length of 500 and a thinning factor of 10 were run to obtain an effective sample size of over 1000 for almost all parameters[9].

5. Results

The distribution of respondents across all categorical independent variables by support for the PVV or another party is shown in Table 1. Table 2 shows summary statistics of the continuous independent variables. Lastly, Table 3 shows the correlation coefficients between the district-level variables. The average house price in a district was negatively correlated with the proportion of unemployed residents (r=-0.56), with the percentage of non-western ethnic minorities (r=-0.36), and with the change in this percentage (r=-0.15). Table 3 also shows that the percentage of highly educated residents clearly captures a different dimension of a district's characteristics than the variables measuring local economic conditions, as it is not correlated with either the average house price or the

[8] This means that in case of nonlinear specifications, the linear coefficients will indicate the steepness of the slope at the mean value of the distribution.
[9] Exceptions were the constant in Model 1 (ESS=657) and the coefficient for the district-level variance, which had an ESS of 430, 208, 299, 349, and 183 for models 1, 2, 3, 4, and 5, respectively.

proportion of unemployed residents. Furthermore, the percentage of highly educated residents in a district was positively correlated with the percentage of non-western ethnic minorities (r=0.33) but negatively correlated with changes in this percentage (r=-0.19).

--- Table 1-3 about here

Table 4 gives the results of the multilevel logistic regression models. Model 1 shows a highly negative constant, indicating that the overall chance of supporting the PVV was low. Most of the higher-level variance in Model 1 was located at the municipal level, with an ICC of about 8.3%[10]. Turning to Model 2, the parameters of our temporal controls (i.e. month and month squared) show that PVV support increased between December 2008 and December 2009, after which it stabilised. This is consistent with the general trend of increasing support over this period observed in national elections. Furthermore, Model 2 shows that PVV support was higher among male, younger, native Dutch, lower educated, non-religious and catholic, and lower middle-income (i.e. those earning 1000-2999 euros per month) respondents. This is largely consistent with individual effects on voting for PRRPs found in previous studies (e.g. Ford & Goodwin, 2010; Golder, 2016; Inglehart & Norris, 2016). The substantive decrease in DIC of Model 2 compared to the null model indicates that a lot of the variation between respondents could be accounted for by individual characteristics. In addition, introducing individual characteristics to the model reduced the proportion of unexplained variance located at the municipal level to about 5.5%, indicating that part of the variation in PVV support between municipalities could be explained by the uneven spatial distribution of respondents by individual characteristics (i.e. by compositional effects). The remaining variation at both the municipal and district levels can be explained by contextual characteristics at the district level, which we turn to next.

Model 3 shows that the percentage of non-western ethnic minorities in a district had no significant effect on the chance of supporting the PVV, refuting hypotheses H1A and H1B. Likewise, no significant effects were found for changes in the percentage of non-western minorities, refuting hypothesis H1C.

[10] The ICC was calculated by taking an individual-level variance term of 3.29 (Hox et al., 2010).

Regarding the local economic conditions, no effects were found for the average house price and the proportion of unemployed residents in a district, making us reject hypotheses H2A and H2B. A negative and significant effect was found for the percentage of highly educated residents in a district, which is consistent with the existence of a consensual neighbourhood effect hypothesised in H3A: respondents who lived in districts with higher proportions of highly educated residents were less likely to support the PVV, taking into account their individual characteristics.[11] Furthermore, Model 4 shows significant effects of both the linear and the quadratic term of this effect, and adding the quadratic term to the model led to a decrease of the DIC of about 2.6 points. This provides evidence that the effect of the proportion of highly educated residents in a district was nonlinear, confirming hypothesis H3B. The nature of this nonlinear effect is shown in Figure 1. The probability of supporting the PVV slightly increased with rising proportions of highly educated residents at the lower end of the scale. The effect turned negative when highly educated residents made up around 25% of the population in the district, and PVV support decreased sharply at the higher end of the scale.[12] This effect was quite substantive, with a threefold decrease in the probability of supporting the PVV when going from a district where 25% of the population was highly educated to a district where 45% of the population was highly educated.

--- Table 4 and Figure 1 about here

Finally, Model 5 shows that no significant interaction effects were found between the frequency of contact with Dutch neighbours and the district-level proportion of highly educated residents. This means that the contextual effect of the proportion of highly educated residents was the same for

[11] Additional analyses also included the municipal-level percentage of minorities, the degree of segregation in a municipality, as well as the interaction between these variables (Biggs & Knauss, 2012). None of these variables had a significant effect, nor did including the variables in the model change the interpretation of the other variables.

[12] An alternative non-linear specification of the model, in which the percentage of highly educated in a district was grouped into quintiles, showed a similar pattern.

respondents that had no contact, yearly/monthly contact, weekly contact, or daily contact with Dutch neighbours, refuting hypothesis H3C.

6. Discussion

This study found no contextual effects of the local ethnic composition and local economic conditions on support for the PVV, which might come as no surprise when considering the mixed findings of previous research (e.g. Lubbers & Scheepers, 2000; Coffé et al., 2007; Bowyer, 2008; Rink et al., 2009; Rydgren & Ruth, 2013; Savelkoul et al., 2017; De Blok & Van der Meer, 2018) and the conflicting directions of the formulated hypotheses. One possible explanation of the absence of a contextual effect of these characteristics is that opposing mechanisms might be cancelling each other's effects. The local presence of ethnic minorities – and increases therein – might enable positive ethnic contact for some while instigating feelings of ethnic threat for others, hereby obscuring relationships at the aggregate level. The same might hold for the effect of local economic conditions, where bad economic conditions might augment feelings of political discontent and of competition between natives and minorities for some, while others might change their support to parties seen as better equipped to tackle economic crises.

The most interesting finding of this study, however, is probably that of a consensual neighbourhood effect. Although this relationship is well-known in the general electoral geography literature (e.g. Johnston & Pattie, 2006), it has been examined less frequently for PRRPs, where studies have mainly focused on the local ethnic composition and local unemployment. It was found that support for the PVV was much lower in districts with more highly educated residents, after controlling for individual education, which is in line with previous findings for PRRPs in Germany (Dülmer & Klein, 2005) and the UK (Ford & Goodwin, 2010). Furthermore, it was found that this effect was nonlinear, as it only became negative when highly educated residents made up around 25% of the population. PVV support dropped sharply after this point was passed, with a threefold decrease in the probability of supporting the PVV when going from a district where 25% of the population was highly educated to a district

where 45% of the population was highly educated. A possible explanation of this nonlinear nature of the effect is that a 'critical mass' of highly educated residents is needed before they start affecting their neighbours' political views. Only when a political view – in this case an anti-PRRP stance – gains sufficient local support will it start pressuring residents to adapt to the local normative context.

This brings us to the mechanisms that might explain consensual neighbourhood effects, which are still treated as somewhat of a 'black box' (Johnston et al., 2005; Galster, 2012). It is often assumed that consensual neighbourhood effects are the result of contact with neighbours. The residential environment is expected to structure the opportunities for (political) contact, and contact in turn induces consensus (e.g. Miller, 1978; MacAllister et al., 2001; Dulmer & Klein, 2005). Empirical evidence of this mechanism is scarce, however. Although there is ample evidence that political views spread through discussion networks (e.g. Huckfeldt & Sprague, 1995; Pattie & Johnston, 1999; Beck, 2002), few studies ground these discussions in the local residential environment. The present study attempted to do exactly this and found that the effect of the proportion of highly educated residents in a district was the same for respondents who had no contact with neighbours, yearly or monthly contact with neighbours, weekly contact with neighbours, and daily contact with neighbours. It thus seems that (frequent) contact with neighbours is no prerequisite for a consensual neighbourhood effect to occur. One explanation is that neighbours form only a small part of people's political discussion network, next to spouses, relatives, friends, colleagues, etc., and have been shown to have a smaller influence on people's political views than, for example, relatives (Pattie & Johnston, 1999).

If contact with neighbours plays no or only a small role in causing consensual neighbourhood effects, what other mechanisms may explain the relationship between the district-level proportion of highly educated residents and support for the PVV? The residential environment may be important beyond how it structures social networks (McClurg, 2006), and other, more subtle ways may exist through which the local normative context may affect residents' political views. One mechanism that has been proposed is that of 'emulation' (Johnston et al., 2005). Here, people choose to behave like their

neighbours without necessarily interacting with them, on the basis of observed or inferred behavioural patterns (Johnston et al., 2005). This is in line with Huckfeldt & Sprague's (1995: 107) assertion that ''[n]ot all information obtained through social interaction comes via the means of political discussion. Some of it comes from lapel pins, yard signs, and bumper stickers. Other information comes through subtle but often powerful forms of nonverbal communication''. Applied to PRRP support, this would mean that individuals living in an environment that is perceived to be hostile towards PRRP ideology adapt their political views to fit into this environment, without necessarily having contact with their neighbours.

Although the relationship between the district-level proportion of highly educated residents and support for the PVV has so far been attributed to consensual neighbourhood effects – either as a result of contact with neighbours or of emulation – alternative explanations remain completely feasible. One problem that has puzzled scholars of contextual effects is that of selective migration, or the selective sorting of certain individuals into certain places (Hedman & Van Ham, 2012). Some studies have shown that people select into areas that are supportive of their political views (Tam Cho et al., 2013; Gallego et al., 2016), and the patterns found here may thus be the result of the selective migration of PVV supporters into residential areas that are supportive of PRRP ideology. Another alternative explanation is that the PVV might have concentrated its mobilising effort in areas with a significant presence of potential voters (e.g. neighbourhoods with high shares of low educated residents) in local campaigns. As local campaigns have been shown to significantly affect election outcomes (e.g. Johnston & Pattie, 2006) the patterns found here may (partly) be the result of selective campaigning by the PVV.

7. Conclusion

The literature on contextual effects on support for the populist radical right so far has mainly focused on the effects of unemployment and migration, which has yielded contradictory results (e.g. Rink et al., 2009; De Blok & Van der Meer, 2018). This study shows that it might be more relevant to instead focus attention on the contextual effect of a local normative context. It was found that support for the

Dutch PVV was much lower in districts with high shares of highly educated residents, which is consistent with theories on consensual neighbourhood effects as well as with previous studies on the populist radical right (Dülmer & Klein, 2005; Ford & Goodwin, 2010). Furthermore, it was shown that contact with neighbours, which is often assumed to explain this effect, was not a prerequisite for the effect to occur. Future studies should investigate the various mechanisms that may produce aggregate relationships between the residential environment and individual political views, with the challenging task to disentangle the effects of contact with neighbours, emulation mechanisms, selective migration, and local campaigning.

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9. Tables and Figure

Table 1 – Distribution of respondents across categorical independent variables by support for the PVV or another party[a]

	PVV		Other party		Total	
	N	%	N	%	N	%
Sex						
Female	70	4.9	1350	95.1	1420	53.7
Male	141	11.5	1084	88.5	1225	46.3
Ethnicity						
Dutch	204	8.4	2226	91.6	2430	91.9
Western	7	3.3	208	96.7	215	8.1
Education level						
Low	105	13.9	651	86.1	756	28.6

Middle	91	8.2	1020	91.8	1111	42.0
High	15	1.9	763	98.1	778	29.4
Religion						
No religion	160	9.3	1553	90.7	1713	64.8
Catholic	37	8.7	390	91.3	427	16.1
Protestant	9	2.5	350	97.5	359	13.6
Other	5	3.4	141	96.6	146	5.5
Income						
0-999	55	9.0	553	91.0	608	23.0
1000-1999	60	12.5	419	87.5	479	18.1
2000-2999	46	7.8	540	92.2	586	22.2
3000-3999	25	5.4	439	94.6	464	17.5
4000+	9	3.8	229	96.2	238	9.0
Don't know/don't want to say	16	5.9	254	94.1	270	10.2
Contact with Dutch neighbours						
Never	4	3.9	99	96.1	103	3.9
Yearly/monthly	34	5.5	582	94.5	616	23.3
Weekly	54	7.8	634	92.2	688	26.0
Daily	119	9.6	1119	90.4	1238	46.8
Total	211	8.0	2434	92.0	2645	100

[a] For the 'PVV' and 'Other party' columns, percentages are calculated for the row total, whereas for the 'Total' column percentages are calculated for the column total.

Table 2 – Summary statistics of continuous independent variables

	Mean	Standard deviation	Range
Months since start	8.3	5.3	0-17
Age	31.7	9.1	14-47
Percentage non-western minorities	9.8	10.1	0-85
Change in percentage non-western minorities	0.5	2.5	-26-28
Average house price	234.4	54.3	113-459
Proportion unemployed	18.4	6.9	5-42
Percentage highly educated	28.8	9.8	14.7-66.3

Table 3 – Pearson's correlations between district-level variables

	% non-western	Δ% non-western, 2005-2009	Average house price	‰ unemployed	% highly educated
% non-western	1.00				
Δ% non-western, 2005-2009	**0.15**	1.00			
Average house price	**-0.36**	**-0.15**	1.00		
‰ unemployed	**0.19**	**0.08**	**-0.56**	1.00	
% highly educated	**0.33**	**-0.19**	0.01	0.01	1.00

Bold values indicate p<0.05

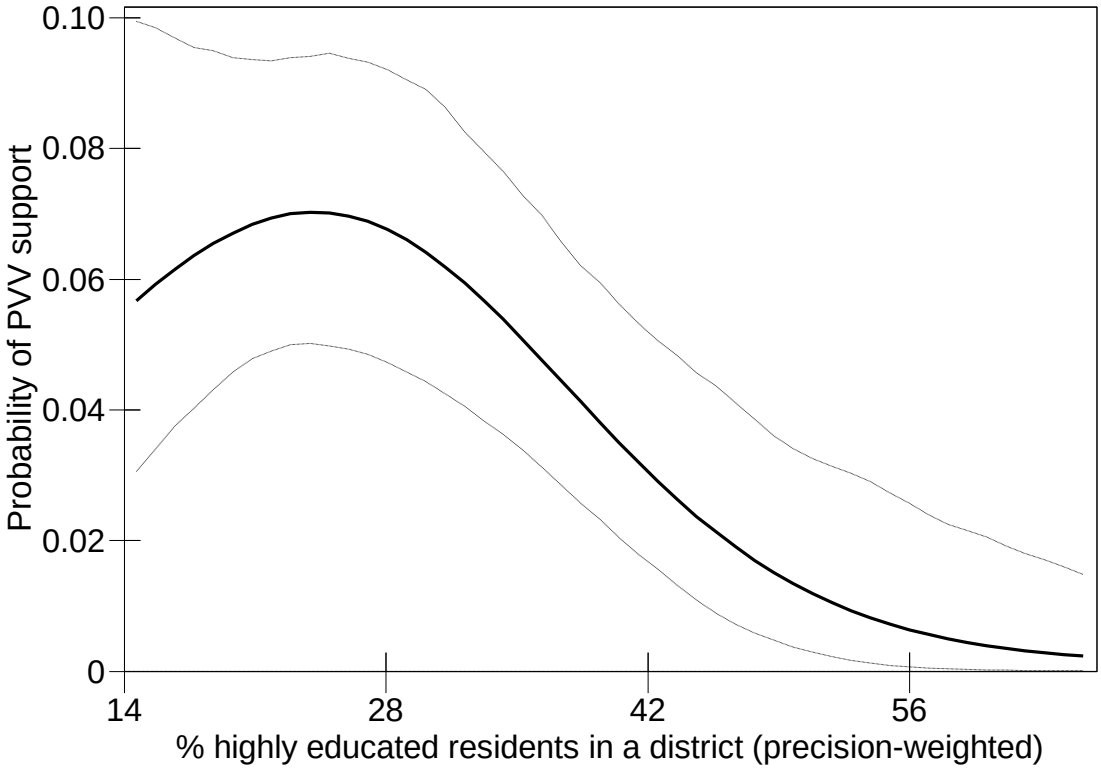
Table 4 - Coefficients, standard errors, and variance components of multilevel logistic regression models (N=2645). Dependent variable: PVV support.

	Model 1		**Model 2**		**Model 3**		**Model 4**		**Model 5**	
	b	SE	b	SE	B	SE	b	SE	b	SE
Constant	**-2.554**	0.134	**-2.548**	0.281	**-2.654**	0.283	**-2.438**	0.289	**-3.131**	0.756
Individual level										

Interview month			**0.068**	0.019	**0.069**	0.019	**0.067**	0.019	**0.070**	0.019
Interview month^2			**-0.009**	0.004	**-0.008**	0.004	**-0.009**	0.004	**-0.008**	0.004
Sex (ref=female)										
Male			**0.925**	0.163	**0.921**	0.162	**0.924**	0.162	**0.935**	0.163
Age			**-0.025**	0.011	**-0.026**	0.011	**-0.025**	0.011	**-0.024**	0.011
Ethnicity (ref=Dutch)										
Western			**-1.098**	0.432	**-1.006**	0.434	**-0.997**	0.430	**-1.014**	0.438
Education level (ref=low)										
Middle			**-0.591**	0.170	**-0.583**	0.171	**-0.582**	0.169	**-0.587**	0.171
High			**-2.061**	0.309	**-1.887**	0.319	**-1.841**	0.310	**-1.840**	0.317
Religion (ref=no religion)										
Catholic			-0.074	0.222	-0.081	0.222	-0.083	0.219	-0.091	0.222
Protestant			**-1.314**	0.380	**-1.383**	0.387	**-1.371**	0.378	**-1.401**	0.386
Other			**-1.157**	0.506	**-1.156**	0.509	**-1.175**	0.504	**-1.164**	0.511
Income (ref=0-999)										
1000-1999			**0.978**	0.251	**0.978**	0.252	**0.969**	0.250	**1.023**	0.253
2000-2999			**0.592**	0.284	**0.579**	0.287	**0.574**	0.285	**0.576**	0.291
3000-3999			0.493	0.327	0.499	0.329	0.469	0.328	0.465	0.332
4000+			0.170	0.446	0.149	0.450	0.160	0.444	0.149	0.449
Don't know/don't want to say			0.199	0.340	0.195	0.341	0.202	0.343	0.179	0.346
Contact with Dutch neighbours (ref=never)										
Yearly/monthly									0.331	0.755
Weekly									0.657	0.740
Daily									0.814	0.724
District level										
% non-western					-0.011	0.012	-0.009	0.012	-0.009	0.012
Δ% non-western, 2005-2009					-0.031	0.044	-0.044	0.044	-0.047	0.046
Average house price					0.000	0.002	0.001	0.002	0.001	0.002
‰ unemployed					0.010	0.017	0.013	0.016	0.012	0.017
% highly educated					**-0.034**	0.013	**-0.026**	0.014	0.009	0.093
% highly educated^2							**-0.003**	0.001	-0.010	0.009
Cross-level interactions										
Contact with Dutch neighbours (ref=never) x % highly educated										
Yearly/monthly x % highly educated									-0.059	0.098
Weekly x % highly educated									-0.039	0.095
Daily x % highly educated									-0.032	0.094
Yearly/monthly x % highly educated^2									0.007	0.009
Weekly x % highly educated^2									0.008	0.009
Daily x % highly educated^2									0.006	0.009
Variance components										
Municipality level	0.307	0.143	0.196	0.118	0.097	0.099	0.078	0.084	0.073	0.082
District level	0.115	0.114	0.060	0.079	0.115	0.125	0.084	0.096	0.101	0.111
DIC	1429.823		1278.081		1280.696		1278.100		1289.352	

Bold values indicate Bayesian p<0.05

Figure 1 – Predicted probability of PVV support and its confidence intervals by the precision-weighted percentage of highly educated residents in a district. Based on Model 4.[a]



[a] As calculated for the 'typical' respondent in the sample (i.e. at the mean of all other independent variables).